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EXAMINER

MORRISON, JAY A

ART UNIT PAPER NUMBER

2168

DATE MAILED: 06/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/602,126	Applicant(s) DON ET AL.	
	Examiner Jay A. Morrison	Art Unit 2168	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 and 21-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19 and 21-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicants arguments filed on 4/10/06. Claims 1-19 and 21-34 are pending for examination.

The amendments to the specification have been noted and accepted.

The amendments to claims 17 and 27 to overcome the claim objections have been noted and accepted.

The rejection under 35 U.S.C. 112, second paragraph, to claims 4,6,14, and 29, as being indefinite, has been removed with respect to Applicants amended claims 4,6,14, and 29.

The rejection under 35 U.S.C. 112, second paragraph, to claim 33, as insufficient antecedent basis, has been removed with respect to Applicants amended claim 33.

Claim Objections

2. Applicant is advised that should claim 5 be found allowable, claim 6 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). Note/explanation: "an email server" (as in claim 5) is the same

as "an email exchange server" (as in claim 6) because an email server exchanges email, which is their function, hence the duplication and lack of further limitation.

Applicant is advised that should claim 28 be found allowable, claim 29 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). Note/explanation: "an email server" (as in claim 5) is the same as "an email exchange server" (as in claim 6) because an email server exchanges email, which is their function, hence the duplication and lack of further limitation.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-3,7-13,16-19,21-26,30-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spencer, JR. ('Spencer' hereinafter) (Publication Number 2002/0188610) in view of Wong et al. ('Wong' hereinafter) (Patent Number 6,889,229).

With respect to claim 1, Spencer teaches

"In a middle tier server system that includes a back end server at a first tier and one or more additional servers at a middle tier, each additional server using multiple types of data objects that must be defined on the one or more additional servers before the data objects can be used by the one or more middle tier servers, a method for deploying one or more data types from the back end server to the one or more middle tier servers in a manner that maintains consistency and compatibility in the definitions of the data types and in code associated with each data type as stored on each middle tier server in the system, the method comprising:" (see abstract; figure 4)

"back end ... acting as a single and centralized source" (paragraph [0054]; figure 4);

"back end" (paragraph [0054]; figure 4);

"middle tier" (application servers, paragraph [0086]; figure 4);

"multi tier" (layers, paragraph [0086]; figure 4).

Spencer does not explicitly indicate “an act of creating a special table in a database of the ... server, the special table including one or more fields for storing data identifying data types corresponding code for enabling use of each of the data types, and the ... server ... from which all ... servers obtain data types and the corresponding code required to enable use of the data types by the one or more ... servers; an act of identifying a data type to be deployed from the ... server to the one or more ... servers; an act of obtaining an extended assembly that corresponds to the data type to be deployed, the extended assembly including data obtained from the special table including data identifying the data type and the code for enabling use of the data type; and an act of transmitting the extended assembly to the one or more ... servers in the ... system such that the data type as transmitted to and received by the one or more ... servers in the ... system is consistent and compatible with a data type of the same kind stored on other ... servers in the system”.

However, Wong discloses “an act of creating a special table in a database of the ... server, the special table including one or more fields for storing data identifying data types corresponding code for enabling use of each of the data types, and the ... server ... from which all ... servers obtain data types and the corresponding code required to enable use of the data types by the one or more ... servers; an act of identifying a data type to be deployed from the ... server to the one or more ... servers; an act of obtaining an extended assembly that corresponds to the data type to be deployed, the extended assembly including data obtained from the special table including data identifying the data type and the code for enabling use of the data type; and an act of

transmitting the extended assembly to the one or more ... servers in the ... system such that the data type as transmitted to and received by the one or more ... servers in the ... system is consistent and compatible with a data type of the same kind stored on other ... servers in the system” (data structure that defines user-defined type and associated data dictionary definition is equivalent to the claimed special table for data that identifies data types and code for enabling their use, column 6, lines 14-30; propagation of changes is equivalent to the claimed act of identifying, column 18, lines 53-63; data dictionary is equivalent to the claimed extended assembly, column 6, line 52 through column 7, line 4; data sent from existing server to new server is equivalent to the claimed transmitting of assembly to servers in the system, column 7, lines 22-33).

It would have been obvious to one of ordinary skill in the art to combine Spencer and Wong because using the steps of “an act of creating a special table in a database of the ... server, the special table including one or more fields for storing data identifying data types corresponding code for enabling use of each of the data types, and the ... server ... from which all ... servers obtain data types and the corresponding code required to enable use of the data types by the one or more ... servers; an act of identifying a data type to be deployed from the ... server to the one or more ... servers; an act of obtaining an extended assembly that corresponds to the data type to be deployed, the extended assembly including data obtained from the special table including data identifying the data type and the code for enabling use of the data type; and an act of transmitting the extended assembly to the one or more ... servers in the ... system such that the data type as transmitted to and received by the one or more ...

servers in the ... system is consistent and compatible with a data type of the same kind stored on other ... servers in the system” would have given those skilled in the art the tools to improve the invention by copying some or all of the database objects to multiple sites on the network. This gives the user the advantage of having common data objects across the network of systems.

With respect to claim 2, Spencer teaches

“middle tier” (application servers, paragraph [0086]; figure 4).

Spencer does not explicitly indicate “an act of creating logic modules in the one or more ... servers that enable utilization of the extended as assembly”.

However Wong discloses “an act of creating logic modules in the one or more ... servers that enable utilization of the extended as assembly” (placing data into the data dictionary of the new site, column 7, lines 57-65).

It would have been obvious to one of ordinary skill in the art to combine Spencer and Wong because using the steps of “an act of creating logic modules in the one or more ... servers that enable utilization of the extended as assembly” would have given those skilled in the art the tools to improve the invention by copying some or all of the database objects to multiple sites on the network. This gives the user the advantage of having common data objects across the network of systems.

With respect to claim 3, Spencer teaches

“the back end server includes a relational database” (paragraph [0097]).

With respect to claim 7, Spencer teaches

“middle tier” (application servers, paragraph [0086]; figure 4).

Spencer does not explicitly indicate “the act of identifying the data type to be deployed includes determining that the one or more ... servers has requested or does not yet enable use of the data type”.

However, Wong discloses “the act of identifying the data type to be deployed includes determining that the one or more ... servers has requested or does not yet enable use of the data type” (new master site not holding information about user-defined type, column 7, lines 5-33).

It would have been obvious to one of ordinary skill in the art to combine Spencer and Wong because using the steps of “the act of identifying the data type to be deployed includes determining that the one or more ... servers has requested or does not yet enable use of the data type” would have given those skilled in the art the tools to improve the invention by copying some or all of the database objects to multiple sites on the network. This gives the user the advantage of having common data objects across the network of systems.

With respect to claim 8, Spencer teaches

“middle tier” (application servers, paragraph [0086]; figure 4);

“multi tier” (layers, paragraph [0086]; figure 4).

Spencer does not explicitly indicate “an act of adding a new ... server to the ... system, and wherein the new ... server comprises the one or more ... servers that has requested or does not yet enable use of the data type”.

However, Wong discloses “an act of adding a new ... server to the ... system, and wherein the new ... server comprises the one or more ... servers that has requested or does not yet enable use of the data type” (new master site, column 7, lines 5-21).

With respect to claim 9,

Spencer does not explicitly indicate “an act of creating one or more object tables that are linked to the special table and that include additional information defining the data type to be deployed, such that the extended assembly also includes the additional information”.

However, Wong discloses “an act of creating one or more object tables that are linked to the special table and that include additional information defining the data type to be deployed, such that the extended assembly also includes the additional information” (creating the database object on the new master site using the replicated data dictionary definition, column 7, lines 33-43).

It would have been obvious to one of ordinary skill in the art to combine Spencer and Wong because using the steps of “an act of creating one or more object tables that are linked to the special table and that include additional information defining the data type to be deployed, such that the extended assembly also includes the additional

information” would have given those skilled in the art the tools to improve the invention by copying some or all of the database objects to multiple sites on the network. This gives the user the advantage of having common data objects across the network of systems.

With respect to claim 10, Spencer teaches

“In a middle tier server system that includes a back end server at a first tier and one or more additional servers at a middle tier, each additional server using multiple types of data objects that must be defined on the one or more additional servers before the data objects can be used by the one or more middle tier servers, a method for deploying one or more data types from the back end server to the one or more middle tier servers in a manner that maintains consistency and compatibility in the definitions of the data types and in code associated with each data type as stored on each middle tier server in the system, the method comprising:” (see abstract; figure 4)

“back end ... acting as a single and centralized source” (paragraph [0054]; figure 4);

“back end” (paragraph [0054]; figure 4);

“middle tier” (application servers, paragraph [0086]; figure 4);

“multi tier” (layers, paragraph [0086]; figure 4).

Spencer does not explicitly indicate “an act of modifying a special table in a database of the ... server, the special table including one or more fields for storing data that identifies data types and includes corresponding code for enabling use of each of

the data types, and the ... server ... from which all ... servers obtain data types and the corresponding code required to enable use of the data types by the one or more ... servers, the act of modifying including at least one of modifying the stored data within the one or more fields and adding new stored data to the one or more fields; an act of identifying a data type to be deployed from the ... server to the one or more ... servers; an act of obtaining an extended assembly that corresponds to the data type to be deployed, the extended assembly including at least one of the modified stored data and the new stored data as obtained from the special table, including data identifying the data type and the code for enabling use of the data type; and an act of transmitting the extended assembly to the one or more ... servers in the ... system such that the data type as transmitted to and received by the one or more ... servers in the ... system is consistent and compatible with a data type of the same kind stored on other ... servers in the system".

However, Wong discloses "an act of modifying a special table in a database of the ... server, the special table including one or more fields for storing data that identifies data types and includes corresponding code for enabling use of each of the data types, and the ... server ... from which all ... servers obtain data types and the corresponding code required to enable use of the data types by the one or more ... servers, the act of modifying including at least one of modifying the stored data within the one or more fields and adding new stored data to the one or more fields; an act of identifying a data type to be deployed from the ... server to the one or more ... servers; an act of obtaining an extended assembly that corresponds to the data type to be

deployed, the extended assembly including at least one of the modified stored data and the new stored data as obtained from the special table, including data identifying the data type and the code for enabling use of the data type; and an act of transmitting the extended assembly to the one or more ... servers in the ... system such that the data type as transmitted to and received by the one or more ... servers in the ... system is consistent and compatible with a data type of the same kind stored on other ... servers in the system” (data or changes referencing leaf attributes are equivalent to the claimed modification of a special table, column 15, lines 41-50; propagation of changes is equivalent to the claimed act of identifying, column 18, lines 53-63; data dictionary is equivalent to the claimed extended assembly, column 6, line 52 through column 7, line 4; data sent from existing server to new server is equivalent to the claimed transmitting of assembly to servers in the system, column 7, lines 22-33).

It would have been obvious to one of ordinary skill in the art to combine Spencer and Wong because using the steps of “an act of modifying a special table in a database of the ... server, the special table including one or more fields for storing data that identifies data types and includes corresponding code for enabling use of each of the data types, and the ... server ... from which all ... servers obtain data types and the corresponding code required to enable use of the data types by the one or more ... servers, the act of modifying including at least one of modifying the stored data within the one or more fields and adding new stored data to the one or more fields; an act of identifying a data type to be deployed from the ... server to the one or more ... servers; an act of obtaining an extended assembly that corresponds to the data type to be

deployed, the extended assembly including at least one of the modified stored data and the new stored data as obtained from the special table, including data identifying the data type and the code for enabling use of the data type; and an act of transmitting the extended assembly to the one or more ... servers in the ... system such that the data type as transmitted to and received by the one or more ... servers in the ... system is consistent and compatible with a data type of the same kind stored on other ... servers in the system” would have given those skilled in the art the tools to improve the invention by copying some or all of the database objects to multiple sites on the network. This gives the user the advantage of having common data objects across the network of systems.

With respect to claim 11, Spencer teaches

“middle tier” (application servers, paragraph [0086]; figure 4);

Spencer does not explicitly indicate “an act of determining which of one or more ... servers should be sent the extended assembly”.

However, Wong discloses “an act of determining which of one or more ... servers should be sent the extended assembly” (new master site not holding information about user-defined type, column 7, lines 5-33).

It would have been obvious to one of ordinary skill in the art to combine Spencer and Wong because using the steps of “an act of determining which of one or more ... servers should be sent the extended assembly” would have given those skilled in the art the tools to improve the invention by copying some or all of the database objects to

multiple sites on the network. This gives the user the advantage of having common data objects across the network of systems.

With respect to claim 12, Spencer teaches

“middle tier” (application servers, paragraph [0086]; figure 4);

Spencer does not explicitly indicate “the extended assembly enables use of the data type to be deployed at the one or more ... servers that have been determined to be sent the extended assembly”.

However, Wong discloses “the extended assembly enables use of the data type to be deployed at the one or more ... servers that have been determined to be sent the extended assembly” (new master using replicated data dictionary descriptions to create a database object, column 7, lines 33-43).

It would have been obvious to one of ordinary skill in the art to combine Spencer and Wong because using the steps of “the extended assembly enables use of the data type to be deployed at the one or more ... servers that have been determined to be sent the extended assembly” would have given those skilled in the art the tools to improve the invention by copying some or all of the database objects to multiple sites on the network. This gives the user the advantage of having common data objects across the network of systems.

With respect to claim 13, Spencer teaches

“the back end server includes a relational database” (paragraph [0097]).

With respect to claim 16, Spencer teaches

“multi tier” (layers, paragraph [0086]; figure 4).

Spencer does not explicitly indicate “the act of modifying includes adding new stored data corresponding to a new data type not previously enabled in the ... system prior to adding the new stored data”.

However, Wong discloses “the act of modifying includes adding new stored data corresponding to a new data type not previously enabled in the ... system prior to adding the new stored data” (transferring the contents of the database object when it is first instantiated, column 18, lines 53-62).

It would have been obvious to one of ordinary skill in the art to combine Spencer and Wong because using the steps of “the act of modifying includes adding new stored data corresponding to a new data type not previously enabled in the ... system prior to adding the new stored data” would have given those skilled in the art the tools to improve the invention by copying some or all of the database objects to multiple sites on the network. This gives the user the advantage of having common data objects across the network of systems.

With respect to claim 17, Spencer teaches

“In a middle tier server system that includes a back end server at a first tier and one or more additional servers at a middle tier, each additional server using multiple types of data objects that must be defined on the one or more additional servers before

the data objects can be used by the one or more middle tier servers a method for deploying one or more data types from the back end server to the one or more middle tier servers in a manner that maintains consistency and compatibility in the definitions of the data types and in code associated with each data type as stored on each middle tier server in the system, the method comprising:" (see abstract; figure 4)

"back end ... which acts as a single and centralized source" (paragraph [0054]; figure 4);

"back end" (paragraph [0054]; figure 4);

"middle tier" (application servers, paragraph [0086]; figure 4);

"multi tier" (layers, paragraph [0086]; figure 4).

Spencer does not explicitly indicate "an act of adding a new ... server to the ... system, the new ... server being configured to utilize extended assemblies that are obtained from the ... server ... from which all ... servers obtain data types and corresponding code required to enable use of the data types by the one or more ... servers, the extended assemblies being configured to enable the use of one or more data types that are defined by data and enabled by code that is contained in the extended assemblies; an act of determining which of the one or more data types are to be deployed from the ... server to the new ... server; an act of obtaining one or more extended assemblies corresponding to the one or more data types that have been determined to be deployed, each of the one or more extended assemblies including data and code obtained from a special table stored in the database of the ... server, the special table including one or more fields for storing data identifying data types and

corresponding code for enabling use of each of the data types; and an act of transmitting, to the new ... server, the one or more extended assemblies that correspond to the one or more data types that have been determined to be deployed such that the one or more data types as transmitted to and received by the new ... server are consistent and compatible with one or more data types of the same kind on other ... servers in the system and which were received by the other ... servers from the ... server”.

However, Wong discloses “an act of adding a new ... server to the ... system, the new ... server being configured to utilize extended assemblies that are obtained from the ... server ... from which all ... servers obtain data types and corresponding code required to enable use of the data types by the one or more ... servers, the extended assemblies being configured to enable the use of one or more data types that are defined by data and enabled by code that is contained in the extended assemblies; an act of determining which of the one or more data types are to be deployed from the ... server to the new ... server; an act of obtaining one or more extended assemblies corresponding to the one or more data types that have been determined to be deployed, each of the one or more extended assemblies including data and code obtained from a special table stored in the database of the ... server, the special table including one or more fields for storing data identifying data types and corresponding code for enabling use of each of the data types; and an act of transmitting, to the new ... server, the one or more extended assemblies that correspond to the one or more data types that have been determined to be deployed such that the one or more data types as transmitted to

and received by the new ... server are consistent and compatible with one or more data types of the same kind on other ... servers in the system and which were received by the other ... servers from the ... server" (new master site is equivalent to the claimed new middle tier server and Wong's data from the data dictionary which describes a database object are equivalent to the claimed extended assemblies, column 7, line 5-65; data dictionary is equivalent to the claimed extended assembly, column 6, line 52 through column 7, line 4; data dictionary sent from existing server to new server is equivalent to the claimed transmitting of assembly to servers, column 7, lines 22-57).

It would have been obvious to one of ordinary skill in the art to combine Spencer and Wong because using the steps of "an act of adding a new ... server to the ... system, the new ... server being configured to utilize extended assemblies that are obtained from the ... server ... from which all ... servers obtain data types and corresponding code required to enable use of the data types by the one or more ... servers, the extended assemblies being configured to enable the use of one or more data types that are defined by data and enabled by code that is contained in the extended assemblies; an act of determining which of the one or more data types are to be deployed from the ... server to the new ... server; an act of obtaining one or more extended assemblies corresponding to the one or more data types that have been determined to be deployed, each of the one or more extended assemblies including data and code obtained from a special table stored in the database of the ... server, the special table including one or more fields for storing data identifying data types and corresponding code for enabling use of each of the data types; and an act of

transmitting, to the new ... server, the one or more extended assemblies that correspond to the one or more data types that have been determined to be deployed such that the one or more data types as transmitted to and received by the new ... server are consistent and compatible with one or more data types of the same kind on other ... servers in the system and which were received by the other ... servers from the ... server” would have given those skilled in the art the tools to improve the invention by copying some or all of the database objects to multiple sites on the network. This gives the user the advantage of having common data objects across the network of systems.

With respect to claim 18, Spencer teaches

“middle tier” (application servers, paragraph [0086]; figure 4);

Spencer does not explicitly indicate “the act of determining is based at least in part on the capabilities of the new ... server”.

However, Wong discloses “the act of determining is based at least in part on the capabilities of the new ... server” (server unable to process the data, column 7, lines 43-57).

It would have been obvious to one of ordinary skill in the art to combine Spencer and Wong because using the steps of “the act of determining is based at least in part on the capabilities of the new ... server” would have given those skilled in the art the tools to improve the invention by copying some or all of the database objects to multiple sites on the network. This gives the user the advantage of having common data objects across the network of systems.

With respect to claim 19, Spencer teaches
“middle tier” (application servers, paragraph [0086]; figure 4);
Spencer does not explicitly indicate “the act of determining is based at least in part on a request by the new ... servers for data to enable use of one or more data types”.

However, Wong discloses “the act of determining is based at least in part on a request by the new ... servers for data to enable use of one or more data types” (the database server on the new master site not finding the name in the data structure and automatically moving the data defining the user-defined type from the existing master site to the new master site, column 7, lines 43-65).

It would have been obvious to one of ordinary skill in the art to combine Spencer and Wong because using the steps of “the act of determining is based at least in part on a request by the new ... servers for data to enable use of one or more data types” would have given those skilled in the art the tools to improve the invention by copying some or all of the database objects to multiple sites on the network. This gives the user the advantage of having common data objects across the network of systems.

With respect to claim 21, Spencer teaches
“In a middle tier server system that includes a back end server at a first tier and one or more additional servers at a middle tier, each additional server using multiple types of data objects that must be defined on the one or more additional servers before

the data objects can be used by the one or more middle tier servers a method for deploying one or more data types from the back end server to the one or more middle tier servers in a manner that maintains consistency and compatibility in the definitions of the data types and in code associated with each data type as stored on each middle tier server in the system, the method comprising:" (see abstract; figure 4)

"back end ... acting as a single and centralized source" (paragraph [0054]; figure 4);

"back end" (paragraph [0054]; figure 4);

"middle tier" (application servers, paragraph [0086]; figure 4);

"multi tier" (layers, paragraph [0086]; figure 4).

Spencer does not explicitly indicate "an act of creating a special table in a database of the ... server, the special table including one or more fields for storing data identifying a data type and corresponding code for enabling use of the data type, and the ... server ... from which all ... servers obtain data types and the corresponding code required to enable use of the data types by the one or more ... servers; a step for deploying the data type from the ... server to the one or more ... servers such that the data type as transmitted to and received by the one or more ... servers in the ... server system is consistent and compatible with a data type of the same kind stored on other ... servers in the system".

However, Wong discloses "an act of creating a special table in a database of the ... server, the special table including one or more fields for storing data identifying a data type and corresponding code for enabling use of the data type, and the ... server

... from which all ... servers obtain data types and the corresponding code required to enable use of the data types by the one or more ... servers; a step for deploying the data type from the ... server to the one or more ... servers such that the data type as transmitted to and received by the one or more ... servers in the ... server system is consistent and compatible with a data type of the same kind stored on other ... servers in the system" (data structure that defines user-defined type and associated data dictionary definition is equivalent to the claimed special table for data that identifies data types and code for enabling their use, column 6, lines 14-30; data sent from existing server to new server is equivalent to the claimed deploying of data type to servers in the system, column 7, lines 22-33).

It would have been obvious to one of ordinary skill in the art to combine Spencer and Wong because using the steps of "an act of creating a special table in a database of the ... server, the special table including one or more fields for storing data identifying a data type and corresponding code for enabling use of the data type, and the ... server ... from which all ... servers obtain data types and the corresponding code required to enable use of the data types by the one or more ... servers; a step for deploying the data type from the ... server to the one or more ... servers such that the data type as transmitted to and received by the one or more ... servers in the ... server system is consistent and compatible with a data type of the same kind stored on other ... servers in the system" would have given those skilled in the art the tools to improve the invention by copying some or all of the database objects to multiple sites on the

network. This gives the user the advantage of having common data objects across the network of systems.

With respect to claim 22, Spencer teaches

“middle tier” (application servers, paragraph [0086]; figure 4);

“multi tier” (layers, paragraph [0086]; figure 4).

Spencer does not explicitly indicate “an act of identifying the data type to be deployed; an act of obtaining an extended assembly that corresponds to the data type to be deployed, the extended assembly including the data from the special table identifying the data type and the code for enabling use of the data type; and an act of transmitting the extended assembly to one or more ... servers in the ... system”.

However, Wong discloses “an act of identifying the data type to be deployed; an act of obtaining an extended assembly that corresponds to the data type to be deployed, the extended assembly including the data from the special table identifying the data type and the code for enabling use of the data type; and an act of transmitting the extended assembly to one or more ... servers in the ... system” (propagation of changes is equivalent to the claimed act of identifying column 18, lines 53-63; data dictionary is equivalent to the claimed extended assembly, column 6, line 52 through column 7, line 4).

It would have been obvious to one of ordinary skill in the art to combine Spencer and Wong because using the steps of “an act of identifying the data type to be deployed; an act of obtaining an extended assembly that corresponds to the data type

to be deployed, the extended assembly including the data from the special table identifying the data type and the code for enabling use of the data type; and an act of transmitting the extended assembly to one or more ... servers in the ... system" would have given those skilled in the art the tools to improve the invention by copying some or all of the database objects to multiple sites on the network. This gives the user the advantage of having common data objects across the network of systems.

With respect to claim 23, Spencer teaches

"middle tier" (application servers, paragraph [0086]; figure 4).

Spencer does not explicitly indicate "an act of creating logic in the one or more ... servers that enables utilization of the extended assembly".

However, Wong discloses "an act of creating logic in the one or more ... servers that enables utilization of the extended assembly" (placing data into the data dictionary of the new site, column 7, lines 57-65).

It would have been obvious to one of ordinary skill in the art to combine Spencer and Wong because using the steps of "an act of creating logic in the one or more ... servers that enables utilization of the extended assembly" would have given those skilled in the art the tools to improve the invention by copying some or all of the database objects to multiple sites on the network. This gives the user the advantage of having common data objects across the network of systems.

With respect to claim 24,

Spencer does not explicitly indicate “an act of creating at least one object table that includes at least some information defining the data type, and wherein the extended assembly includes the at least some information”.

However, Wong discloses “an act of creating at least one object table that includes at least some information defining the data type, and wherein the extended assembly includes the at least some information” (creating the database object on the new master site using the replicated data dictionary definition, column 7, lines 33-43).

It would have been obvious to one of ordinary skill in the art to combine Spencer and Wong because using the steps of “an act of creating at least one object table that includes at least some information defining the data type, and wherein the extended assembly includes the at least some information” would have given those skilled in the art the tools to improve the invention by copying some or all of the database objects to multiple sites on the network. This gives the user the advantage of having common data objects across the network of systems.

With respect to claims 25-26,

These claims are rejected on grounds corresponding to the arguments given above for rejected claims 1-2 and are similarly rejected.

With respect to claims 30-32,

These claims are rejected on grounds corresponding to the arguments given above for rejected claims 7-9 and are similarly rejected.

With respect to claim 33,

Spencer does not explicitly indicate “the modifying at least one of the special table and the one or more object tables”.

However, Wong discloses “the modifying at least one of the special table and the one or more object tables” (column 15, lines 45-50).

It would have been obvious to one of ordinary skill in the art to combine Spencer and Wong because using the steps of “the modifying at least one of the special table and the one or more object tables” would have given those skilled in the art the tools to improve the invention by copying some or all of the database objects to multiple sites on the network. This gives the user the advantage of having common data objects across the network of systems.

With respect to claim 34, Spencer teaches

“middle tier” (application servers, paragraph [0086]; figure 4).

Spencer does not explicitly indicate “the extended assembly is a single data structure that includes all the data required to enable the one or more ... servers to use the data type”

However, Wong discloses “the extended assembly is a single data structure that includes all the data required to enable the one or more ... servers to use the data type” (column 14, lines 23-34)

It would have been obvious to one of ordinary skill in the art to combine Spencer and Wong because using the steps of “the extended assembly is a single data structure that includes all the data required to enable the one or more ... servers to use the data type” would have given those skilled in the art the tools to improve the invention by copying some or all of the database objects to multiple sites on the network. This gives the user the advantage of having common data objects across the network of systems.

5. Claims 4-6,14-15, and 27-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spencer, JR. (‘Spencer’ hereinafter) (Publication Number 2002/0188610) in view of Wong et al. (‘Wong’ hereinafter) (Patent Number 6,889,229), and further in view of Bowman-Amuah (Patent Number 6,578,068).

With respect to claim 4,

Spencer as modified, does not explicitly indicate “a SQL Server”.

However, Bowman-Amuah teaches “a SQL Server” (column 49, lines 48-49 and column 50, lines 1-14).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Spencer as modified, and Bowman-Amuah because using the steps “a SQL Server” would have given those skilled in the art the tools to improve the invention by allowing clients to connect to a server using conventional protocols. This

gives the user the advantage of being able to have the ability to quickly and easily implement servers which are commonly used and available.

With respect to claim 5,

Spencer as modified, does not explicitly indicate "email server".

However, Bowman-Amuah teaches "email server" (column 73, lines 39-47, whereas Barrera's email service is equivalent to the claimed email server).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Spencer as modified, and Bowman-Amuah because using the steps "email server" would have given those skilled in the art the tools to improve the invention by allowing clients to connect to a server using conventional protocols. This gives the user the advantage of being able to have the ability to quickly and easily implement servers which are commonly used and available.

With respect to claim 6,

Spencer as modified, does not explicitly indicate "an email exchange server".

However, Bowman-Amuah teaches "an email exchange server" (column 74, lines 33-35 and column 74, lines 59-68).

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine Spencer as modified, and Bowman-Amuah because using the steps "an email exchange server" would have given those skilled in the art the tools to improve the invention by allowing clients to connect to a server using conventional

protocols. This gives the user the advantage of being able to have the ability to quickly and easily implement servers which are commonly used and available.

With respect to claim 14-15,

These claims are rejected on grounds corresponding to the arguments given above for rejected claims 4-5 and are similarly rejected.

With respect to claims 27-29,

These claims are rejected on grounds corresponding to the arguments given above for rejected claims 4-6 and are similarly rejected.

Response to Arguments

6. Applicant's arguments with respect to claims 1-19 and 21-33 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

The prior art made of record, listed on form PTO-892, and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jay A. Morrison whose telephone number is (571) 272-7112. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Vo can be reached on (571) 272-3642. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jay Morrison
TC2100

A handwritten signature in black ink, appearing to read 'Tim Vo', with a stylized flourish at the end.

Tim Vo
TC2100